

**BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA**

* * * * *

IN THE MATTER OF APPLICATION) FOR BENEFICIAL WATER USE) PERMIT NO. 41S 30025168 BY SCOT) MAXWELL)	FINAL ORDER
---	--------------------

* * * * *

Pursuant to its authority under §§ 2-4-601 et seq., and 85-2-310, MCA, and Mont. Admin. R. 36.12.201 et. seq, and 36.12.501 et seq., and upon the request of Applicant Scot Maxwell, the Department of Natural Resources and Conservation (Department) conducted a show cause hearing in this matter on August 6, 2008, to allow Mr. Maxwell, hereinafter referred to as “Applicant” for the above application, to show cause why the Application For Beneficial Water Use Permit should not be denied based on the Statement of Opinion issued by the Department on May 2, 2008. The show-cause hearing provided the Applicant an opportunity to present additional information and evidence. This Final Order must be read in conjunction with the Statement of Opinion.

APPEARANCES

Applicant Scot Maxwell appeared and represented himself at the hearing. David M. Schmidt, Principal and Senior Water Rights Specialist, Water Right Solutions, Inc. (WRSI) testified for the Applicant.

EXHIBITS

Applicant offered fourteen exhibits, A1-A2, and AA-AL, for the record. The Hearing Examiner accepted and admitted into evidence Applicant’s Exhibits A1-A2, and AA-AL. The following is a list of those exhibits:

- A1:** Professional Resume of David M. Schmidt.
- A2:** Revised criteria supplement for Application For Beneficial Water Use Permit No. 41S 30025168.
- AA:** Copy of aerial photo of the proposed project, its drainage area, and surrounding area.

AB: Runoff calculations (regression equation using the Orsborne Method).
AC: Monthly climate summary, Lewistown FAA AP, Montana (1896-2005).
AD: Average annual stream flow and runoff estimates for the proposed source.
AE: USGS monthly statistics for gauge no. 06112000, Cottonwood Creek near Lewistown, MT (1945-1951).
AF: USGS monthly statistics for gauge no. 06111500, Big Spring Creek near Lewistown, MT (1932-1957).
AG: USGS monthly statistics for gauge no. 06111500, Big Spring Creek near Lewistown, MT (selected data from 1931-1988).
AH: Weather precipitation summary for May/June, 2008.
AI: Photograph of proposed reservoir (reservoir currently exists).
AJ: Justification for proposed irrigation volume.
AK: Copy of volume requirements identified in the Montana Irrigation Guide.
AL: Copy of a topographic map for the area surrounding the proposed project, including the reservoir and places of use.

PRELIMINARY MATTERS

All of the evidence and testimony offered by the Applicant was accepted into the record and no evidence was excluded. This Decision must be read in conjunction with the Statement of Opinion as the hearing was held to address the denial of the Application for the reasons set forth in the Statement of Opinion. This Order considers the new evidence and information presented by Applicant at the hearing and renders the Final Order on this Application.

During the recorded introduction to the hearing, I stated my authority to take Official Notice of public documents. Mont. Admin. R. 36.12.226(c). I have taken Official Notice of two such documents/subjects in the Department's possession:

- A. Literature regarding the Orsborn Method of estimating stream flow (Exhibit X-14 of the Department's Water Rights Claim Examination Manual, Part Two).
- B. A document titled, *"Average Annual Runoff (Inches), Montana", produced by the U.S. Department of Agriculture, Soil Conservation Service, December, 1990.*

The Hearing Examiner, having reviewed the full record in this matter and being fully advised in the premises, does hereby make the following:

FINDINGS OF FACT

General

1. Application for Beneficial Water Use Permit No. 41S 30025168 in the name of and signed by Scot Maxwell was filed with the Department on November 14, 2006. (Department file)
2. Notice of the Application was properly made in the Lewistown News Argus on September 15, 2007. No objections were received to the application. (Department file)
3. The Environmental Assessment (EA), dated April 12, 2007, prepared by the Department for this application was reviewed and is included in the record of this proceeding. (Department file)
4. The application proposes to appropriate a total of 3.7 acre-feet of surface water from January 1 – December 31 from an unnamed tributary of Big Spring Creek. The proposed uses are stock and lawn and garden irrigation, with periods of use from January 1 – December 31, and April 25 – October 9, respectively. Water will be impounded in a 3.4 acre-foot capacity on-stream reservoir. The volume for irrigation purposes is 2.1 acre-feet, and the volume for stock purposes is 1.6 acre-feet. The anticipated entire evaporation component of 1.5 acre-feet annually was assigned to the volume proposed for stock water purposes. The proposed place of use is 3.00 acres. The point of diversion, place of use and place of storage are all located in the SWNWNE Section 16, T15N, R18E, Fergus County. (Department file; public notice)
5. The Application was denied in a Statement of Opinion from Lewistown Regional Office Manager Scott Irvin May 2, 2008, the contents of which is hereby incorporated by reference.
6. The Application was proposed to be denied based on failure to prove the criteria of Physical Availability, Legal Availability, Adverse Affect, Adequacy of Diversion, and Beneficial Use.
7. Criteria related to Possessory Interest and Water Quality were addressed in the Statement of Opinion and were not part of this hearing, 85-2-402(2)(b), (d), (f), and (g).
8. Applicant requested a show cause hearing on May 30, 2008. The Applicant verbally requested the hearing date be delayed for a period of time to find a consultant and better prepare for the hearing, and the Department agreed.

Physical Availability

9. No flow rate is requested for this application because the source is ephemeral and the diversion works is an on-stream dam/reservoir. Mont. Admin. R. 36.12.113(5). When the source flows, all water will be impounded unless the reservoir is full, at which time water will pass through via an emergency spillway. The source only flows during snowmelt runoff and high precipitation events. (Application; testimony of Scot Maxwell)
10. The Applicant's consultant calculated the estimated average annual flow into the reservoir at .048 cfs, or 34.69 acre-feet annually by using the Orsborn Method, a regional regression equation that incorporates drainage and climatic conditions. The drainage area was calculated to be 85.14 acres, and the mean annual precipitation is 17.66 inches, based on 109 years of record at the Lewistown airport. In addition, monthly runoff, in volume and flow rate, was derived by using 7 years of gauged data in nearby Cottonwood Creek as a basis for a hydrologic comparison. Mr. Schmidt believes the comparison is valid because Cottonwood Creek has a similar aspect and he expects snowmelt runoff to occur at the same time as the subject source. (Applicant's Exhibits A-E)
11. According to Department literature, the Orsborn Method of estimating stream flow is not a tested method in eastern Montana. The literature contains qualifications of its use, and acknowledges the potential for significant estimation errors when using the equation for the various delineated regions in Montana. The literature cites the following caution in discussion of the Orsborn Method: *"The first method, based on Orsborn's input/output ratio, can be unreliable, particularly when used to evaluate areas where non-consecutive regions adjoin."* (Official Notice – Exhibit X-14 of the Department's Water Rights Claim Examination Manual, Part Two)
12. The Applicant's consultant testified that he observed the reservoir at full capacity on June 10, 2008, while conducting a site inspection. The site inspection occurred during an exceptionally wet time of year. In addition, the Applicant submitted an undated photograph of the reservoir showing the water level at approximately 2-3 feet from full capacity. (Testimony of David Schmidt; Applicant's Exhibits H-I)
13. According to a Department document titled, *"Average Annual Runoff (Inches), Montana"*, average annual runoff in the vicinity of the proposed appropriation is 0.5-1.0 inch per year. The document was developed by the U.S. Department of Agriculture, Soil Conservation Service, in 1990. Since the drainage area for the reservoir is 85 acres, the estimated annual runoff, per this federal government document, is between 3.54 and

7.08 acre-feet ($85 \text{ acres} * 0.5"/12" = 3.54 \text{ af}$; and $85 * 1.0"/12" = 7.08 \text{ af}$). I find that this document is a more reasonable reflection of average runoff potential in the location of the proposed project, for the purposes of evaluating a new permit application, than the Orsborn Method used by the Applicant. I have taken official notice of this data source to compare against the Applicant's values for runoff. (Official Notice -*Average Annual Runoff (Inches), Montana.*)

14. I find the Applicants estimation of runoff using the Orsborn Method is doubtful for typical or average conditions on the source. However, because of the evidence of the reservoir filling to capacity this year, consideration of the U.S. Department of Agriculture's document, *Average Annual Runoff (Inches), Montana*, and the unique physical circumstances of the location of the reservoir and ephemeral nature of the source, I find that water is physically available in the proposed annual appropriation of 3.7 acre-feet.

Legal Availability

15. The Applicant analyzed legal availability and found no other water rights above or below the proposed diversion point on the source. I concur with this assessment. When flowing, the source enters into a tributary of Big Spring Creek, Buttermilk Creek, and into the Lewistown Ditch Company canal. Department records do not reflect that the Lewistown Ditch Co. holds water rights from this source, and therefore have no legal right to its continued use. When the water is not being consumed by irrigators on the ditch, it likely flows into Big Spring Creek several miles below the diversion point. (Application; testimony of David Schmidt)
16. The Montana Department of Fish, Wildlife and Parks (DFWP) holds an instream flow Murphy Right on Big Springs Creek of 110 cfs. (Application)
17. The Applicant provided U.S. Geological Survey flow records for a gauge on Big Spring Creek near Lewistown. The data include a continuous period of record from June, 1932 through September, 1957, and sporadic measurements taken during select years between 1966 and 1988, with one measurement taken in 1931. The continuous period of record (1932-1957) identifies relatively consistent mean monthly discharges between 106 cfs and 109 cfs. The sporadic period of record (1931 and 1966-1988) indicates mean monthly discharges between 120.3 cfs and 149.8 cfs. Table 1 of Applicant's Exhibit 2 summarizes the sporadic period of record, and shows that during the selected dates, discharges typically exceeded DFWP's 110 cfs Murphy Right. The sporadic

nature of the data was not clarified by the Applicant or Applicant's consultant, and therefore is unclear whether the data were "cherry picked" from a larger data set. The gauge was located near Big Spring, the origination point of Big Spring Creek. Additional tributary inflow contributes to Big Spring Creek below the gauged data. (Applicant's Exhibits E-F; testimony of David Schmidt)

18. I find that water is legally available on the source during runoff events. Testimony by the Applicant, his consultant, and information in the Application indicates the subject source flows only during runoff events. I also find that water is reasonably legally available on Big Spring Creek when runoff events are occurring on the subject source. During runoff events, sufficient water is legally available to satisfy existing water rights.

Adverse Affect

19. No other water users are present on the subject source. The Applicant analyzed adverse affect to one water user on Big Spring Creek, DFWP. Department records show that DFWP has an instream flow Murphy Right of 110 cfs, with a priority date of December 21, 1970. The period of appropriation for the Murphy Right is year-around. The Applicant's consultant indicated the source flows into the Lewistown Ditch Co. canal, and if water makes its way into Big Spring Creek from the canal, it does so several miles downstream from where the subject tributary naturally flows into Big Spring Creek. The water may have been consumed by the Lewistown Ditch Co. for portions of many years, therefore may not have been available to satisfy DFWP's Murphy Right during the irrigation season. The Applicant's consultant believes no other water users could be affected, particularly because of the physical circumstance of the source not reaching Big Spring Creek at a natural discharge point. The Applicant's consultant developed a table summarizing mean monthly flows for Big Spring Creek from available flow data (Applicant's Exhibits F-G). The data indicate Big Spring Creek flows at or slightly above DFWP's instream flow Murphy Right throughout the year. However, the data were recorded at the USGS gauge near Big Spring, and there is substantial tributary inflow below the former gauge site that contributes additional flows to Big Spring Creek. Testimony by the Applicant, his consultant, and information in the Application indicates the subject source flows only during runoff events. I find that during rare times of runoff on the source, Big Spring Creek stream flows exceed the gauged data downstream of the former USGS gauge site. During significant runoff

events, like those necessary to contribute appreciable flows to the proposed project, Big Spring Creek has sufficient water available to meet prior existing water rights.

(Application; Applicant's Exhibits 2, and F-H; testimony of Applicant; testimony of David Schmidt)

20. The Applicant's consultant testified the Applicant has a plan to mitigate adverse affect to prior appropriators, if a call is made on his water right. The Applicant proposes to use a portable pump to bypass incoming flows to meet demand. (Testimony of David Schmidt)
21. I find that no adverse affect will result to existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state reservation has been issued. In the rare situation where demand exceeds supply in a runoff event, and a call is made on the Applicant's water right, the Applicant has a plan to meet that demand. Because a call is likely to be rare, the pump plan is adequate in this limited circumstance. (Department file; testimony of Applicant; testimony of David Schmidt)

Adequacy of Diversion

22. The means of diversion is an earth-filled dam, which has already been constructed. A licensed private contractor constructed the dam. The dam has a base width of approximately 110 feet, and top width of 12 feet. The dam height is 18 feet and has an emergency spillway with 4 feet of freeboard. According to the Application Review Form, and per communication with the Applicant, the reservoir is not equipped with a drainage device and there is no plan to install such device. The Applicant's consultant testified the Applicant will install a portable pump to bypass inflows if a call is made on his water right. The Applicant's consultant testified that the reservoir was at full capacity on June 10, 2008, and therefore proves the dam adequate for storing water. (Application file; testimony of David Schmidt)
23. I find the diversion works are adequate because the Applicant has a plan to utilize a portable pump to bypass incoming stream flows to downstream, prior water users if a call is made on his water right. Again, because a call is likely to be rare, the pump plan and diversion works are adequate in this limited circumstance.

Beneficial Use

24. The total volume of water proposed to be used is 3.7 acre-feet. No flow rate is proposed because the reservoir is located on an ephemeral source, and will impound all flows. The proposed uses are 2.1 acre-feet for lawn and garden irrigation, and 1.6 acre-feet for stock water. A volume of 1.5 acre-feet has been projected for evaporation and seepage from the reservoir, and is included in the stock water volume.
25. The Applicant cited §85-2-102(4), MCA, as proof that irrigation and stock water are beneficial uses of water. The irrigation diversion (secondary diversion from the reservoir) will consist of a 3.5 horsepower pump diverting water for 0.8 acres of grass irrigation, and a drip irrigation system for watering 168 trees. The volume of water proposed for grass irrigation is 1.5 acre-feet, which is less than the Department's administrative rule standards for new permits (ARM 36.12.115(b)) but conforming to the Montana Irrigation Guide for grass production. The Applicant cited literature from the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln for estimating the amount of water necessary to grow a shelterbelt/trees. At maturity it is estimated the trees will require 48 gallons per tree for 24 weeks, for a total of 0.6 acre-feet annually. Applicant intends to water 5 cows from the reservoir. The volume of water proposed for stock use is 0.1 acre-feet (the volume sufficient to supply 5 animal units), conforming to standards noted in ARM 36.12.115(c) for new permits. The remaining volume (1.5 acre-feet) is anticipated to evaporate from the reservoir. The Applicant cited studies conducted by the Joint Technical Working Group for the Upper Missouri River compact between the Bureau of Land Management and State of Montana to arrive at an evaporation rate. I find the resources used to substantiate water use are appropriate. (Application file; Applicant's Exhibits 2, and J-K)
26. I find the Applicant has proven the proposed use of water is a beneficial use and the volume is needed to sustain the proposed beneficial uses.

CONCLUSIONS OF LAW

1. The Department has jurisdiction to issue a provisional permit for the beneficial use of water if the applicant proves the criteria in Mont. Code Ann. §85-2-311 by a preponderance of the evidence. Mont. Code Ann. §85-2-311(1).
2. A permit shall be issued if there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; water can reasonably be considered legally available during the period in which the applicant seeks to

appropriate, and in the amount requested, based on an **analysis** of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water; the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state reservation will not be adversely affected based on a consideration of an applicant's **plan** for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied; the proposed means of diversion, construction, and operation of the appropriation works are adequate; the proposed use of water is a beneficial use; the applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use; and, if raised in a valid objection, the water quality of a prior appropriator will not be adversely affected, the proposed use will be substantially in accordance with the classification of water, and the ability of a discharge permit holder to satisfy effluent limitations of a permit will not be adversely affected. Mont. Code Ann. §85-2-311 (1) (a) through (h).

3. A public notice containing the facts pertinent to the permit application must be published once in a newspaper of general circulation in the area of the source and mailed to certain individuals and entities and such notice was published. Mont. Code Ann. §85-2-307. (See Finding of Fact No. 2)
4. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate during runoff events. Mont. Code Ann. §85-2-311(1)(a)(i). (See Finding of Fact Nos. 10-14)
5. The Applicant has proven that water can reasonably be considered legally available during the period which the Applicant seeks to appropriate in the amount requested during runoff events. Mont. Code Ann. § 85-2-311(1)(a)(ii). (See Finding of Fact Nos. 15, 17-18)
6. The Applicant has proven that the water rights of prior appropriators under existing water rights, certificates, permits, or state reservations will not be adversely affected during runoff events. The Applicant has a plan for the exercise of the permit that demonstrates the Applicants use of water can be controlled so the water rights of a prior appropriator will be satisfied. Because of the unique nature of the location and source, the

Department finds that a call situation will be rare and the Applicant's plan is sufficient in this limited circumstance. See *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992)(an applicant must prove that, at least in some years, sufficient unreserved water will be physically available at the point of diversion to supply the amount requested throughout the period of appropriation, and that at least in some years, no legitimate calls for water will be made on him by a senior appropriator). Mont. Code Ann. 85-2-311(1)(b). (See Findings of Fact Nos. 19-21)

7. The Applicant has proven that the proposed means of diversion, construction, and operation of the appropriation works are adequate. Mont. Code Ann. 85-2-311 (1)(c). (See Finding of Fact Nos. 22-23)
8. The Applicant has proven by a preponderance of evidence that the proposed use is a beneficial use and that the volume is the amount of water needed to sustain the proposed beneficial use. ARM 36.12.113(1). Mont. Code Ann. §85-2-311(1)(d). (See Finding of Fact Nos. 24-26)
9. The Applicant has proven a possessory interest in the property where water is to be put to beneficial use. The possessory interest criteria were not at issue in this hearing, as the Applicant had previously proven the criteria. Mont. Code Ann. §85-2-311(1)(e). (See Finding of Fact No. 7, Statement of Opinion)
10. No objection was raised as to the issue of water quality of a prior appropriator being adversely affected, or as to the ability of a discharge permit holder to satisfy effluent limitation of a permit. The water quality criteria were not at issue in this hearing. Mont. Code Ann. §§ 85-2-402(2)(f), (g). (See Finding of Fact No. 7)

WHEREFORE, based upon the foregoing Findings of Fact and Conclusions of Law, the Hearing Examiner makes the following:

PROPOSED ORDER

Application For Beneficial Water Use Permit No. 41S 30025168 by Scot Maxwell is **ISSUED**.

NOTICE

A person who has exhausted all administrative remedies available within the agency and who is aggrieved by a final decision is entitled to judicial review under the Montana Administrative Procedure Act (Title 2, Chapter 4, Mont. Code Ann.). A petition for judicial review under this chapter must be filed in the appropriate district court within 30 days after service of the final order. (Mont. Code Ann. § 2-4-702)

If a petition for judicial review is filed and a party to the proceeding elects to have a written transcript prepared as part of the record of the administrative hearing for certification to the reviewing district court, the requesting party must make arrangements for preparation of the written transcript. If no request for a written transcript is made, the Department will transmit only a copy of the audio recording of the oral proceedings to the district court.

Dated this 11th day of August, 2008.

/Original signed by Scott Irvin/
Scott Irvin
Hearings Officer
Water Resources Division
Department of Natural Resources
and Conservation
613 NE Main St
Lewistown, MT 59457

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the **FINAL ORDER** was served upon all parties listed below on this 11th day of August, 2008, by first-class United States mail.

SCOT MAXWELL
410 A STREET
LEWISTOWN, MT 59457

DAVID SCHMIDT
WATER RIGHT SOLUTIONS, INC
303 CLARKE ST
HELENA, MT 59601

/Original signed by Sherry Silberhorn/
Sherry Silberhorn, Water Right Technician
DNRC-Lewistown, 538-7459